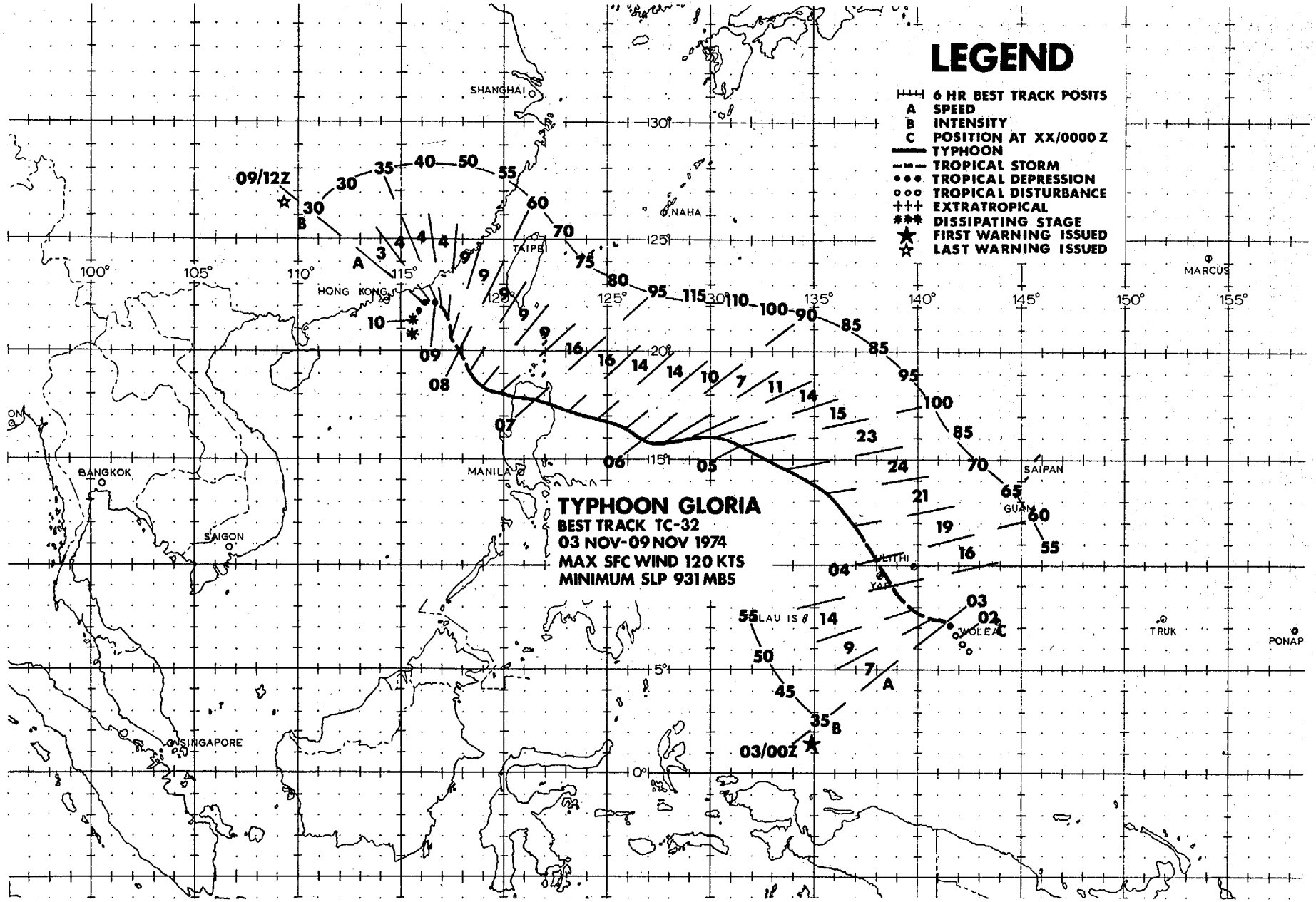
LEGEND
6 HR BEST TRACK POSITS
A SPEED
B INTENSITY
C POSITION AT XX/0000 Z
TYPHOON
TROPICAL STORM
TROPICAL DEPRESSION
TROPICAL DISTURBANCE
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED
TYPHOON GLORIA
BEST TRACK TC-32
03 NOV-09 NOV 1974
MAX SFC WIND 120 KTS
MINIMUM SLP 931 MBS
09/12Z
03/00Z
SHANGHAI
NAHA
TAIPEI
HONG KONG
MANILA
BANGKOK
SAIGON
SINGAPORE
SAIPAN
GUAM
TRUK
PONAP
MARCUS
LAU IS
YAP
WOLEAI
100°
105°
110°
115°
120°
125°
130°
135°
140°
145°
150°
155°
30°
25°
20°
15°
10°
5°
0°

Gloria, like Elaine, developed a large circulation with the cyclone's 1000 mb isobar reaching 400 nm in diameter while traversing the Philippine Sea. Gloria, however, developed to these dimensions early in its life as the storm reached typhoon force 50 nm north of Yap Island on 4 November (Figure 4-27). Earlier Gloria, developing from a depression in the active monsoon trough, had passed about 10 nm northeast of Yap Island. The island's weather station registered a minimum pressure of 985.7 mb at 03/2020Z and later a peak gust of 46 knots as winds shifted to the west.

The building of a strong surface ridge southwest from Marcus Island subjected Gloria to a tightening gradient and strengthening flow in the right semicircle. Strong winds were observed at a considerable distance to the northeast with Andersen AFB Guam, 350 nm from the center, observing gusts to 46 knots midday on the 3rd.

Gloria commenced an unusual acceleration in forward speed up to 24 knots during the 4th - twice the normal for the area. Moving some 500 nm in 24 hours, Gloria occupied the central Philippine Sea early on the 5th. The FREDRICK LYKES caught west of the center at 05/0000Z reported northwest winds of 60 knots, while the barometer dipped to 983.4 mb.

Rapid deepening occurred once typhoon force was attained early on the 4th as Gloria's central pressure fell at a rate of 2.3 mb/hr during the rest of the day culminating in a minimum of 937 mb at 05/0400Z. Aircraft reconnaissance of the central core region early on the 5th proved extremely difficult as the eye diameter was only 4 nm. Subsequently, the typhoon's central pressure rose to 955 mb during the next 12 hours as Gloria's forward motion slowed temporarily to 10 knots. Following the rapid filling process, the typhoon's central pressure began an unusual second deepening as Gloria once again increased in forward speed (15 knots) targeting in on northern Luzon. The last aircraft reconnaissance of the typhoon in the Philippine Sea (10 hours before landfall) revealed Gloria had strengthened markedly--700 mb flight level winds of 120 knots during penetration and a minimum pressure of 931 mb at 06/0916Z (lowest pressure recorded during the year).

Following landfall, Gloria cut across Luzon in 6 hours. Maximum winds recorded during the cyclone's passage occurred at the northern coastal station of Aparri which reported gusts to 96 knots from the northeast and Vigan on the west coast registering south-southwest winds peaking at 94 knots. Laoag received winds gusting to 81 knots prior to Gloria's emergence in the South China Sea. The island town of Tugubgarao, 20 nm south of the center's path, observed the lowest pressure--972.9 mb. Rainfall amounts for a 24-hour period ranged from 3.8 inches at Aparri to 7.8 inches at Tugubgarao while Baguio reported an extreme of 18.9 inches.

Gloria climaxed a series of five typhoons which affected Luzon in less than a month--a record frequency dating back to 1945. Newspaper reports indicated $3.2 million in damage to crops and public and private property as a result of Gloria. Over 700 homes were destroyed by wind or inundated by floodwaters leaving close to a 1000 persons homeless. A casualty toll of 10 persons was reported in the typhoon's wake mostly due to drownings.

As Gloria exited Luzon into the South China Sea on the 7th, its forward motion slowed and a gradual northward track commenced as surface pressures were anomalously low over South China. However, like Elaine, Gloria failed to reach the China coast. A massive high pressure area from Manchuria began to penetrate into central China on the 9th blocking further northward progress. The influx of modified air off the mainland due to the onset of a northeast monsoon began to affect Gloria by midday of the 8th as the circulation dropped in intensity to storm force. Reduced to a tropical depression by the 9th, Gloria began to drift southward and dissipated on the 10th as pressures continued to build over South China.

During the storm's transit of the waters west of Luzon during the 7th and 8th some of the highest winds reported by merchant vessels during the year occurred. Winds of 65 knots were reported from a British vessel (call sign MYCE) (07/1200Z) and a Kuwait ship (call sign 9KSD) (08/0000Z) as both vessels passed within 60 nm of the eye.

FIGURE 4-27. *Gloria achieving typhoon strength 100 nm north of Yap Island in the Philippine Sea, 4 November 1974, 0300Z. (DMSP imagery)*